Suicide Prevention Through Online Gatekeeping Using Search Advertising Techniques : A Feasibility Study

Suicide Prevention Through Online Gatekeeping Using Search Advertising Techniques: A Feasibility Study

Authors

Hajime Sueki, Ph.D.

Department of Psychology and Education, Faculty of Human Sciences,

Wako University, Machida, Tokyo, Japan

Jiro Ito

NPO OVA

Correspondence

Hajime Sueki, Ph.D.

Department of Psychology and Education,

Faculty of Human Sciences, Wako University

2160 Kanaimachi, Machida, Tokyo 195-8585, Japan

E-mail: h_sueki@wako.ac.jp

Phone/Fax: +81-44-989-7777

Abstract

Background

Nurturing gatekeepers is an effective suicide prevention strategy. Internet-based methods to screen those at high risk of suicide have been developed in recent years but have not been used for online gatekeeping.

Aim

A preliminary study was conducted to examine the feasibility and effects of online gatekeeping.

Methods

Advertisements to promote e-mail psychological consultation service use among Internet users were placed on web pages identified by searches using suicide-related keywords. We replied to all e-mails received between July and December 2013 and analyzed their contents.

Results

A total of 139 consultation service users were analyzed. The mean age was 23.8 years (standard deviation = 9.7), and females accounted for 80%. Suicidal ideation was present in 74.1%, and 12.2% had a history of suicide attempts. After consultation, positive changes in mood were observed in 10.8%, 16.5% showed intentions to seek help from new supporters, and 10.1% of all 139 users actually took help-seeking

actions.

Limitations

Owing to its design, this study did not fully clarify the suicide-preventing effect of online gatekeeping.

Conclusion

Online gatekeeping to prevent suicide by placing advertisements on web search pages to promote consultation service use among internet users with suicidal ideation may be feasible.

Keywords

suicide prevention, online gatekeeping, search advertising, Internet, web

Introduction

At present, over 800,000 individuals worldwide die from suicide each year (World Health Organization, 2014). Particularly among the younger generation, suicide is a leading cause of death (World Health Organization, 2014). Many countries address suicide as an important public health issue. This includes Japan, where the suicide rate has remained high since 1998 (Japanese Cabinet Office, 2013), and preventive measures against suicide have been taken on a nationwide basis since the Basic Act on Suicide Prevention was put forth in 2006.

Nurturing gatekeepers have been reported to be an effective suicide prevention strategy (Mann et al., 2005; Isaac et al., 2009). The term “gatekeeping” refers to an activity to identify the early signs of suicide and facilitate access to appropriate help resources. To date, evidence regarding suicide prevention through gatekeeping has been obtained at a quasi-experimental level (Knox, Litts, Talcott, Feig, & Caine, 2003; Rutz, Knorring, & Wålinder, 1992). Furthermore, in some cohort studies examining the effects of gatekeeping, decreases in the suicide rate and suicidal behavior were observed in target communities (Hegerl, Althaus, Schmidtke, & Niklewski, 2006; Szanto, Kalmar, Hendin, Rihmer, & Mann, 2007). These findings confirm that activities to identify those at high risk of suicide and to facilitate their access to appropriate help resources (such as psychiatric services) after assessment are effective preventive measures against suicide.

In recent years, novel attempts have been made to provide a basis for

gatekeeping using the Internet. The chronological and region-dependent associations between Internet searches using suicide-related keywords and suicide rates have been reported in a large number of studies (Bragazzi, 2014; Gunn & Lester, 2013; Hagihara, Miyazaki, & Abe, 2012; McCarthy, 2010; Yang, Tsai, Huang, & Peng, 2011). Web searches using suicide-related keywords have also been reported to be associated with a history of suicidal behavior (Sueki, 2012). A cross-sectional study based on a detailed review of the inquest reports from suicides showed that the individuals had used the Internet to research the methods of suicide they used in some cases (Gunnell et al., 2012). A large online cohort study by Sueki et al. (2014) showed that the rate of suicide planning over the lifetime was significantly higher in suicide-related Internet users (44.3%) than in a control group (8.3%). In other words, those who search for information using suicide-related keywords are likely to be at high risk of suicide. Further, another online questionnaire survey (n = 301) demonstrated that suicidal online users had the following two types of motives: the constructive motive of needing help from others and the destructive motive of suicide preparation (Sueki & Eichenberg, 2012). This means that placing advertisements on web search result pages may encourage some of these individuals to seek out help resources.

Since 2013, a private non-profit organization in Japan called OVA has been engaging in online gatekeeping using search advertising techniques for those at high risk of suicide (Sueki, 2013a). Their activity aims to facilitate the access of Internet users who search for information using keywords such as “want to die” and “suicide methods” to direct help resources by placing advertisements that encourage them to

use e-mail consultation and assessment services, guiding them toward such resources through e-mail communication. The majority of Internet-based intervention approaches for those at high risk of suicide aim to reduce suicidal ideation mainly through befriending/supportive listening or Internet cognitive behavioral therapy (i-CBT) (Armson, 1997; Gilat & Shahar, 2009; Lai, Maniam, Chan, & Ravindran, 2014; Lester, 2008). In contrast, the focus of online gatekeeping is determining the most appropriate help resources for clients and providing them with such resources, which is markedly different from existing approaches.

While studies about conventional approaches using the Internet for those at high risk of suicide have been studied to some degree, the feasibility and effects of online gatekeeping have not yet been examined. Considering this background, this preliminary study analyzed the data obtained through online gatekeeping in 2013, focusing on its feasibility and effects.

Methods

Procedure

Figure 1 shows the flow diagram for online gatekeeping. Using Google AdWords, keyword-targeted advertisements for a website, entitled: “To you who desire to die,” were placed on web pages identified from the results of searches using suicide-related keywords. The title of the advertisement was also “To you who desire to die” and its subtitle was “Bullying, social isolation, working too much, or violence... Don’t suffer from these alone. Tell us your story.” Table 1 shows the target keywords used in this study, which were selected based on the result of a previous study on suicide-related keywords (Sueki, 2013b), considering both words that were frequently entered with “suicide” when searching using Google Trends, and those recommended by Google AdWords.

The advertisements were linked to the above-mentioned website encouraging use of an e-mail consultation service. The website stated that free consultation services for those with suicidal ideation were available, and outlined the characteristics of the consultants, with an e-mail address for consultations and phrases to encourage viewers to use such services. It also explained that the services were not available for those currently undergoing psychiatric or psychosomatic treatment, and that the collected data might be used for research purposes while maintaining anonymity.

Online gatekeeping was performed when replying to e-mails seeking consultation services. Based on the Gatekeeper Training Textbook (Japanese Cabinet Office, 2012), developed from the Mental Health First Aid Manual (Kitchener & Jorm,

2002), the procedure consisted of the following items, implemented in this order: recognition of the client; initial approaches (establishing trust relationships, supportive listening, and obtaining approval); risk assessment (confirming the presence of suicidal ideation, risk and protective factors, and attitudes toward problem-solving); and support provision (solving problems and guiding toward social resources, such as psychiatric consultation or welfare services).

Inclusion and exclusion criteria

Online gatekeeping was performed for all those who sent e-mails seeking consultation services between July, when this activity was initiated, and December 2013. It was terminated after confirming that clients had not replied for three months after sending their last e-mails in December. Based on this methodology, the online gatekeeping procedure was completely implemented in a total of 151 consultation service users. Among these, 12 users for whom it was difficult to continue e-mail correspondence for some reason, such as the filtering function of the devices that they used for such correspondence, were excluded, and the remaining 139 were analyzed.

Data analysis

The first author and a cooperating researcher independently evaluated the participants' e-mails, focusing on the following items: age, sex, present and previous psychiatric or psychosomatic treatments, presence of suicidal ideation, history of suicide attempts, and positive changes in mood, as well as the development of help-seeking intentions

and behavior. The participants' age, sex, and information regarding suicide risks were requested in the first couple of e-mails from the gatekeeper in every case. Suicidal ideation was assessed based on text in the e-mails. If there was a mention of "want to die" (*Shinitai* in Japanese) or "want to commit suicide" (*Jisatsu-shitai* in Japanese) somewhere in the e-mails, we judged that the user exhibited suicidal ideation. The outcomes of online gatekeeping (i.e., positive changes in mood and the development of help-seeking intentions and behavior) were also assessed based on self-report from the participants' e-mails. Evidence of positive mood changes included mentions of a decrease in suicidal ideation and postponing of suicide attempts. Evidence of the development of help-seeking intentions included mentions of intention to seek help from users who had not mentioned such an intention previously. Evidence of the development of help-seeking behavior included mentions of actually seeking help from whom they were seeking support. When the participants' age was unclear, and only the grade at school was mentioned in their e-mails, the mean age for each grade in Japan's school system was adopted (e.g., 15.5 years of age for freshman high school students). The words (Japanese characters) in each e-mail were counted using the word-count function of Microsoft Word. The first author and a research collaborator read all e-mails and judged the participants' information and case outcomes. When the judgments of the two raters differed, a result was discussed by three people, one of whom was the second author. Subsequently, to analyze the operational status of search advertising, information such as the number of advertisement displays was downloaded using Google AdWords' functions, and diverse descriptive statistics were

collected.

Results

Outcomes of search advertising

The total numbers of advertisement displays and clicks during the study period were 356,745 and 3,008, respectively (click-through rate: 1.2%). The rate of those who used consultation services was approximately 5.3% (159 Internet users ÷ 3,008 clicks × 100). Table 1 shows the top 30 keywords (based on number of clicks) linked to the advertisements and the outcomes of such a link. Both the number of advertisement displays and that of clicks were the highest when using the keywords "want to die," with a click-through rate (number of clicks / number of advertisement displays) of 1.02%. The click-through rate was the highest, 3.10%, when using the keywords "want to die help." The number of advertisement displays exceeded 1,000 only when using the keywords "want to die help."

Consultation service users and analyzed cases

The mean age was 23.8 (standard deviation = 9.7), and females accounted for 80% of the users who e-mailed the consultation service (Table 2). Suicidal ideation was expressed in 74.1% of the e-mails, and at least 12.2% had a history of past suicide attempts. All of the participants who had a history of suicide expressed suicidal ideation. Thirty-six participants (25.9%) had neither suicidal ideation nor a history of suicide attempts.

Table 2 outlines the clients' e-mails. The median number of Japanese characters contained in their initial e-mails was 80, with a range from 0 to approximately 3,000

characters. Replies were sent to all of their e-mails, and, consequently, consultation service use continued in 71.9%. The median number of e-mail correspondences was 6 (sending and receiving, 3 e-mails from each party), with a range from 2 to 137 e-mails.

After consultation, positive changes in mood (including postponing suicide attempts) were observed in 10.8% of the clients. Furthermore, 16.5% showed intentions to seek help from new support resources, and 10.1% of the 139 actually took help-seeking actions.

Discussion

Main findings

In this study, online gatekeeping was performed, placing advertisements in search results to promote help-seeking in those using web search services. This method allowed us to collect e-mails from those seeking consultation services (mostly young females), and produce suicide-preventing effects in approximately 1 out of 4 clients who e-mailed. The results of this study show that using suicide-related search advertisements can allow us to make contact with suicidal Internet users, a methodology suggested in previous studies on search engines (Bragazzi, 2014; Gunn & Lester, 2013; Hagihara, Miyazaki, & Abe, 2012; McCarthy, 2010; Yang, Tsai, Huang, & Peng, 2011). The outcomes of search advertising and the findings from online gatekeeping through e-mail correspondence are discussed below.

Characteristics of consultation service users

Although using search engines enabled us to establish contact with those on the Internet who have suicidal ideation, the clients in this study may have a lower acquired capability for suicide, according to the interpersonal theory of suicide (Joiner, 2005; Van Orden, Witte, Cukrowicz, Braithwaite, Selby, & Joiner, 2010). There are two bases in this presumption. First, the Internet search keywords entered at a relatively high rate (2% or higher) included many related to suicide methods involving less pain or distress ("suicide painless way to die," "painless suicide methods," "easy methods to die"). Second, the proportion of lifetime suicide attempters among the clients (12.2%) was

lower than that of previous studies on suicide-related Internet users. In a questionnaire study involving users of an Internet bulletin board for those at high risk of suicide, approximately 60% had attempted suicide one or more times (Sueki & Eichenberg, 2012). In the present study, the history of suicide attempts was recorded upon the initiation of consultation to assess the risk of suicide, and the incidence was markedly lower (12.2%) than that observed in the previous study. As shown by the keywords that yielded a high click-through rate (e.g., "want to die"), this suggests an association between the online gatekeeping method used in this study and a lower acquired capability for suicide in approachable individuals, although it is necessary to consider the confounding influence of excluding those currently undergoing psychiatric or psychosomatic treatment, on the incidence of suicide attempts.

Effects of online gatekeeping

In the absence of a control group, the effects of online gatekeeping to prevent suicide could not be fully clarified. Furthermore, the majority of previous studies on gatekeepers focused on the influences of gatekeeper education and training in specific communities on the incidence of suicide and suicidal behavior (Knox et al., 2003; May, Serna, Hurt, & DeBruyn, 2005), or examined changes in gatekeepers' knowledge and sense of self-efficacy related to crisis management after education (King & Smith, 2000; Matthieu, Cross, Batres, Flora, & Knox, 2008; Wyman et al., 2008); therefore, it was difficult to compare the results of the present study, which had evaluation indices such as changes in mood and the development of help-seeking intentions and behavior,

with results of previous studies, meaning we could not examine the effects of online gatekeeping. However, in the present study, it was possible through the e-mail consultation services to develop help-seeking intentions (16.5%) or behavior (10.1%) to obtain help from new sources of support in those who strongly "want to die." This supports the usefulness of online gatekeeping using the study method.

Strengths and limitations

In this study, online gatekeeping was performed, placing advertisements to promote help-seeking on search result pages. Crisis intervention using conventional media generally aims to reduce suicidal ideation through supportive listening and i-CBT (Armson, 1997; Gilat & Shahar, 2009; Lai et al., 2014). The online gatekeeping method used in the present study differs markedly from such approaches, as it aimed to determine the most appropriate help resources for clients and then provide them with such resources. Findings from this study may provide basic data regarding the feasibility of online gatekeeping.

However, this study has the following limitations: First, being a preliminary study to examine the feasibility of online gatekeeping using web-advertising techniques, it did not fully clarify the effects of such activity, highlighting the necessity of randomized controlled trials to examine them in more detail. Second, the incidence of suicide in the clients was not examined. Only positive changes in mood and the development of help-seeking intentions and behavior were evaluated. Therefore, it may be necessary to conduct further studies, with the incidence of suicide or suicidal

behaviors as study outcomes. Third, the accuracy of information regarding consultation service users' attributes was insufficient. As their sexes and ages were estimated based on the contents of collected e-mails, non-written information was completely unavailable, and the accuracy of the obtained information is likely to be lower than that of face-to-face surveys, consultations, and studies on crisis intervention by telephone. Fourth, we could not clarify the factors that influence the outcomes (e.g., positive changes in mood and development of help-seeking intentions and behavior) of online gatekeeping because participant information was insufficient. To improve the success rate of the online gatekeeping activity, we should examine the effects of participant demographics and other important factors (e.g., the quickness of responses from the gatekeeper) on the same or similar outcomes in future studies.

Conclusions and future research

Despite the above-mentioned limitations, the present study still has significance, by confirming the feasibility of online gatekeeping to promote consultation service use in young Internet users with suicidal ideation through search advertising. In the future, it may be possible to increase the feasibility of online gatekeeping further by improving and examining the following two points.

First, besides those targeted in this study and listed in Table 1, there may be other useful keywords to promote consultation service use in individuals at high risk of suicide. Furthermore, it is possible to vary the content of the websites linked to web advertisements. As previously mentioned, the consultation service users collected by

the present study method may have had a lower acquired capability for suicide, despite the presence of suicidal ideation and, consequently, the likelihood that they would complete suicide was low, according to the interpersonal theory of suicide (Joiner, 2005; Van Orden et al., 2010). Therefore, it is important to determine appropriate keywords and optimize the content of search pages to approach internet users at higher risk of suicide.

Second, it may be necessary to examine detailed methods to approach consultation service users by e-mail. There was a difference of approximately 6% between the rates of those who developed help-seeking intentions (16.5%) and those who developed help-seeking behavior (10.1%), presumably representing the presence of those who expressed their intentions to visit new helping resources, but did not actually do so. Based on this, individualized approaches to developing help-seeking behavior in consultation service users are likely to increase the overall usefulness of online gatekeeping.

References

Armson, S. (1997). Suicide and cyberspace: Befriending by e-mail. *Crisis*, *18*, 103–105.

Bragazzi, N. L. (2014). A Google Trends-based approach for monitoring NSSI. *Psychology Research and Behavior Management*, *7*, 1–8.

Gilat, I. & Shahar, G. (2009). Suicide prevention by online support groups: An action theory-based model of emotional first aid. *Archives of Suicide Research*, *13*, 52–63.

Gunnell, D., Bennewith, O., Kapur, N., Simkin, S., Cooper, J., & Hawton, K. (2012). The use of the Internet by people who die by suicide in England: A cross sectional study. *Journal of Affective Disorders*, *141*, 480–483.

Gunn III, J. F. & Lester, D. (2013). Using Google searches on the Internet to monitor suicidal behavior. *Journal of Affective Disorders*, *148*, 411–412.

Hagihara, A., Miyazaki, S., & Abe, T. (2012). Internet suicide searches and the incidence of suicide in young people in Japan. *European Archives of Psychiatry and Clinical Neuroscience*, *262*, 39–46.

Hegerl, U., Althaus, D., Schmidtke, A., & Niklewski, G. (2006). The alliance against depression: 2-year evaluation of a community-based intervention to reduce suicidality. *Psychological Medicine*, *36*, 1225–1233.

Isaac, M., Elias, B., Katz, L. Y., Belik, S. L., Deane, F. P., Enns, M. W., & Sareen, J. (2009). Gatekeeper training as a preventative intervention for suicide: A systematic review. *Canadian Journal of Psychiatry*, *54*, 260–268.

Japanese Cabinet Office (2012). Gatekeeper Training Textbook. Available: http://www8.cao.go.jp/jisatsutaisaku/kyoukagekkan/gatekeeper_text.html. Accessed 2014 Jun 18.

Japanese Cabinet Office (2013). 2013 White paper on suicide prevention in Japan. Available: http://www8.cao.go.jp/jisatsutaisaku/whitepaper/en/w-2013/summary.html. Accessed 2014 Jun 18.

Joiner T. (2005). *Why people die by suicide*. Cambridge, MA, US: Harvard University Press.

King, K.A., & Smith, J. (2000). Project SOAR: A training program to increase school counselors' knowledge and confidence regarding suicide prevention and intervention. *Journal of School Health*, *70*, 402–407.

Kitchener, B.A., & Jorm, A.F. (2002). *Mental health first aid manual*. Canberra: Centre for Mental Health Research.

Knox, K.L., Litts, D.A., Talcott, G.W., Feig, J.C., & Caine, E.D. (2003). Risk of suicide and related adverse outcomes after exposure to a suicide prevention programme in the US Air Force: cohort study. *British Medical Journal*, *327*, 1376.

Lai, M.H., Maniam, T., Chan, L.F., & Ravindran, A.V. (2014). Caught in the web: A review of web-based suicide prevention. *Journal of Medical Internet Research*, *16*, e30.

Lester, D. (2008). The use of the Internet for counseling the suicidal individual: Possibilities and drawbacks. *Journal of Death and Dying*, *58*, 233–250.

Mann, J.J., Apter, A., Bertolote, J., Beautrais, A., Currier, D., et al. (2005). Suicide prevention strategies: A systematic review. *Journal of the American Medical Association*, *294*, 2064–2074.

Matthieu, M.M., Cross, W., Batres, A.R., Flora, C.M., & Knox, K.L. (2008). Evaluation of gatekeeper training for suicide prevention in veterans. *Archives of Suicide Research*, *12*, 148–154.

May, P.A., Serna, P., Hurt, L., & DeBruyn, L.M. (2005). Outcome evaluation of a public health approach to suicide prevention in an American Indian tribal nation. *American Journal of Public Health*, *95*, 1238–1244.

McCarthy, M.J. (2010) Internet monitoring of suicide risk in the population. *Journal of Affective Disorders*, *122*, 277–279.

Rutz, W., Knorring, L.V., & Wålinder, J. (1992). Long-term effects of an educational program for general practitioners given by the Swedish Committee for the Prevention and Treatment of Depression. *Acta Psychiatrica Scandinavica*, *85*, 83–88.

Sueki, H. (2012). Association between deliberate self-harm-related Internet searches and the mental states and lifetime suicidal behaviors of Japanese young adults. *Psychiatry and Clinical Neurosciences*, *66*, 451–453.

Sueki, H. (2013a). Internet gatekeeper/Night patrol 2.0. “Suicide prevention and collaboration with media”. The second meeting for the WHO World Suicide Report and Symposium. (December, 2013, Tokyo, AkihabaraUDX)

Sueki, H. (2013b). *Can the Internet prevent suicide?* Tokyo: The University of Tokyo

Press. (In Japanese)

Sueki, H., & Eichenberg, C. (2012). Suicide bulletin board systems comparison between Japan and Germany. *Death Studies*, *36*, 565–580.

Sueki, H., Yonemoto, N., Takeshima, T., & Inagaki, M. (2014). The impact of suicidality-related internet use: A prospective large cohort study with young and middle-aged internet users. *PloS One*, *9*, e94841.

Szanto, K., Kalmar, S., Hendin, H., Rihmer, Z., & Mann, J. J. (2007). A suicide prevention program in a region with a very high suicide rate. *Archives of General Psychiatry, 64*, 914–920.

Van Orden, K.A., Witte, T.K., Cukrowicz, K.C., Braithwaite, S.R., Selby, E.A., & Joiner, T.E. (2010). The interpersonal theory of suicide. *Psychological Review*, *117*, 575–600.

World Health Organization (2014). Suicide prevention (SUPRE). Available: http://www.who.int/mental_health/prevention/suicide/suicideprevent/en/2013. Accessed 2013 Jun 17.

Wyman, P.A., Brown, C.H., Inman, J., Cross, W., Schmeelk-Cone, K., Guo, J., & Pena, J.B. (2008). Randomized trial of a gatekeeper program for suicide prevention: 1-year impact on secondary school staff. *Journal of Consulting and Clinical Psychology*, *76*, 104–115.

Yang, A.C., Tsai, S.J., Huang, N.E., & Peng, C.K. (2011). Association of Internet search trends with suicide death in Taipei City, Taiwan, 2004–2009. *Journal of Affective Disorders*, *132*, 179–184.

About the author

Hajime Sueki, PhD, is a Lecturer in the Faculty of Human Sciences at Wako University, Tokyo, Japan. He received his doctoral degree in clinical psychology at the University of Tokyo, Tokyo, Japan. He has research interests in suicide, the Internet, motivational interviewing, and cognitive behavioral therapy.

Jiro Ito is a psychiatric social worker and representative of NPO OVA in Japan.

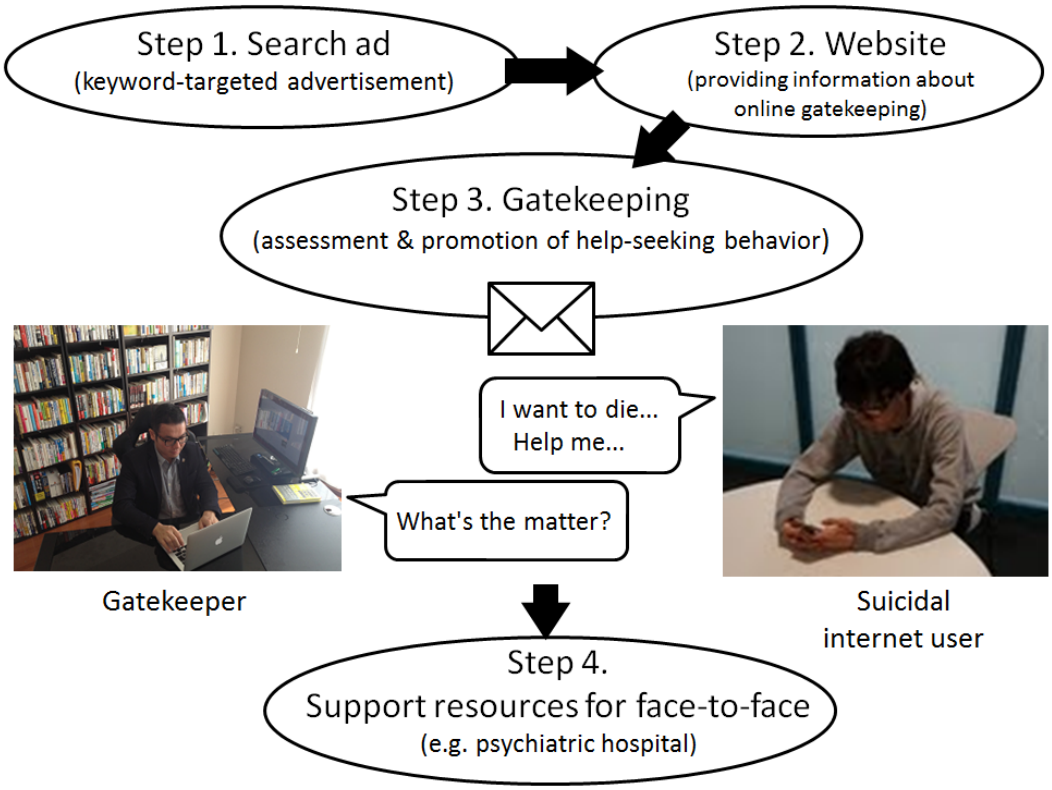

Figure 1

Flow diagram for online gatekeeping

Table 1

Keywords Linked to the Advertisements and the Outcomes of Search Advertising

(Top 30 based on the number of clicks, period: July to December 2013)

Keywords	Original Japanese	Number of clicks	Number of advertisement displays	Click-through rate
want to die	死にたい	1,924	189,145	1.02%
suicide methods	自殺方法	513	38,389	1.34%
suicide painless way to die	自殺 楽な死に方	207	9,686	2.14%
wanna die	しにたい	299	28,610	1.05%
group suicide join	集団自殺 募集	105	4,779	2.20%
suicide methods hanging	自殺方法 首吊り	81	6,655	1.22%
want to commit suicide	自殺したい	73	6,584	1.11%
want to end up my life	もう死にたい	68	3,805	1.79%
painless suicide methods	楽な自殺の方法	66	3,090	2.14%
painless suicide websites	自殺サイト 楽に死ねる方法	50	2,876	1.74%
suffering from living	生きることがつらい	49	6,168	0.79%
want to die help	死にたい 助けて	47	1,517	3.10%
painless suicide	楽 自殺	47	3,794	1.24%
commit suicide join	自殺志願 募集	43	2,133	2.02%
suicide methods charcoal	自殺 方法 練炭	40	2,602	1.54%
euthanasia methods	安楽死 方法	38	1,990	1.91%
most painless method to die	一番楽に死ねる方法	37	1,982	1.87%
easy methods to die	簡単に死ねる方法	37	1,434	2.58%
suicide manual	自殺マニュアル	32	1,137	2.81%
erase myself	消えたい	28	3,942	0.71%
want to die suicide methods	死にたい 自殺方法	27	1,828	1.48%
need help	助けて欲しい	24	1,066	2.25%
secure methods to die	確実に死ねる方法	23	1,151	2.00%
why should I live	生きる意味が分からない	21	1,731	1.21%
why do I live	生きる意味がわからない	21	1,570	1.34%
suicide painless	自殺 楽	20	1,345	1.49%
suicide methods easy	自殺方法簡単	20	1,211	1.65%
depressed want to die	うつ 死にたい	17	1,601	1.06%
suicide methods secure	自殺方法 確実	17	891	1.91%
jumping suicide methods	飛び降り自殺方法	17	1,355	1.25%

Table 2

Outlines of Analyzed Cases

	Total
Outline of consultation service users	
Age: mean (standard deviation)	23.8 (9.7)
Sex: male/female	17/85
Present psychiatric treatment	8 (5.8%)
Previous psychiatric treatment	23 (16.5%)
Presence of suicidal ideation	103 (74.1%)
History of suicide attempt	17 (12.2%)
Contents of e-mails	
Number of Japanese characters on the initial consultation: median (range)	80 (0–2,947)
Total number of Japanese characters: median (range)	1495 (69–34,460)
Total number of e-mail correspondences: median (range)	6 (2–137)
Continuation of consultation	100 (71.9%)
Changes after consultation	
Positive mood change	15 (10.8%)
Help-seeking intention	23 (16.5%)
Help-seeking behavior	14 (10.1%)
Any of these changes	36 (25.9%)